

The Pump Handle



"I had an interview with the Board of Guardians of St. James's parish, on the evening of Thursday, 7th September, and represented the above circumstances to them. In consequence of what I said, the handle of the pump was removed on the following day."

John Snow, 1855

October 2003 Topics

- Ongoing *E. coli* Outbreak Investigation Implicates Grand Forks Restaurant
- Influenza-like Illness and SARS
- Threatening Mail
- Epidemiology in Action Course



Ongoing *E. coli* Outbreak Investigation Implicates Grand Forks Restaurant

The North Dakota Department of Health (NDDoH) was notified in mid-October of four *E. coli* O157:H7 cases that sought medical care within the same week. Further follow-up revealed two of the patients dined at a seafood restaurant in Grand Forks on Sept. 30 and the other two on Oct. 1, 2003.

The restaurant provided a partial list of patrons who had eaten at the restaurant on Sept. 30 and Oct. 1, 2003. Patients presenting to the hospital emergency room with gastrointestinal symptoms within the first week of October also were interviewed by Division of Disease Control epidemiologists. In addition, people contacting the Grand Forks Public Health Department who indicated they ate at the restaurant during this time period also were interviewed. A total of 127 people were interviewed, and 13 were found to meet the case definition of having diarrhea two to 10 days after eating at the restaurant. The reported onset date range was October 3 to October 6, with a median onset date of October 4. The average incubation time between eating and onset of diarrhea was 91 hours (three to four days).

The *E. coli* strains isolated from the four patients reported to the NDDoH all had the same DNA fingerprint. This information suggests that these four patients became ill from a common source. Eating at the seafood restaurant was the likely source of their infection since it was the only identified commonality among the cases. Two restaurant staff members who handled food reported having diarrhea at the same time the cases ate

at the restaurant. Stool samples from these staff members were negative for *E. coli* O157:H7. However, they were collected almost two weeks after symptom onset. Food samples submitted by the restaurant for testing also were negative for *E. coli* O157:H7, although no food that was served during the period in question was available for testing. This investigation is still pending.



Influenza-like Illness and SARS

Influenza-like illness (ILI) (fever, body aches, headaches) is caused by many infectious agents besides the influenza virus, including SARS-associated coronavirus. The influenza vaccine may prevent 70 percent to 90 percent of ILI caused by influenza, but is not effective at preventing ILI caused by other infectious agents. The use of influenza vaccine **should not** be considered as a way to avoid confusing influenza disease with the influenza-like illness caused by SARS.

As of July 5, 2003, transmission chains of SARS were broken; however, health experts fear that SARS may return in the fall with cooler temperatures. If a resurgence of SARS coincides with the influenza season, identification and isolation of suspect SARS cases may be difficult. Health-care workers will be the first line of defense and are most vulnerable if a SARS epidemic occurs.

Health-care workers should be aware of the possibility of the return of SARS and prepare by reviewing and practicing hospital triage and isolation protocols. Guidelines for SARS identification and prevention are available at the CDC's SARS website at www.cdc.gov/ncidod/sars/sarsprepplan.htm.



Threatening Mail

A Grand Forks resident mailed five threatening letters containing white powder to local businesses in August and September 2003. The person sending the letters blamed the businesses for a series of unfortunate events that occurred in the person's life. The envelopes were sent to the Division of Microbiology to rule out anthrax and other possible terrorism agents. Results of the tests were negative. The perpetrator was apprehended and is in custody facing felony charges.

Instructions about how to recognize and handle a suspicious package or envelope can be found at www.bt.cdc.gov/documentsapp/Anthrax/10312001/Han50.asp.



Epidemiology in Action Course

Epidemiology in Action, a 9 ½-day course in basic epidemiology directed by Dr. Philip Brachman of Emory University, will be held in Bismarck, North Dakota, from December 2 through December 12. The course is intended for individuals working in public health. The class is limited to 35 students but will be videotaped for future viewing. The agenda, registration forms and other information on the course is available on the NDDoH Disease Control website at www.health.state.nd.us/disease/conferences/registrationmain.htm.

Contributing authors of The Pump Handle include Julie Goplin, Tracy Miller, Kirby Kruger and Larry Shireley. For questions, suggestions or inquiries, or to be removed from the mailing list, please contact Julie Goplin of the Division of Disease Control at 701.238.2375 or by email at jgoplin@state.nd.us.

The pump handle picture in the title was obtained from the website www.ph.ucla.edu/epi/snow.html.



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